PGI13

ECONOMIC BURDEN AND TREATMENT PATTERNS OF ADULT PATIENTS WITH CHRONIC CONSTIPATION IDENTIFIED THROUGH RETROSPECTIVE DATABASE RESEARCH

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OBJECTIVES: To collect real-world data on the economic burden and treatment patterns associated with chronic constipation in Swedish patients through retrospective database research. **METHODS:** A regional Swedish database was used that combines diagnostic and health care data with prescription drug use and mortality data from national registers. The drug register comprises all dispensations made at pharmacies, defined as dispatches. According to Swedish legislation, a dispatch can last for up to 90 days, which is common for chronic diseases. Adults with chronic constipation (≥2 primary constipation diagnoses, or one primary constipation diagnosis and two associated laxative dispatches, over 12 months) were selected during 2005-2008. Patients with irritable bowel syndrome (IBS) or opioid-induced constipation were excluded. Data were retrieved on: health care contacts and drug use for 12 months from the first constipation diagnosis; patient demographics; and comorbidities. **RESULTS:** Of the initial selection, 2119 patients were excluded owing to opioid use (32%) and 435 owing to IBS (7%). The final population comprised 4043 patients (60% women) with a mean age of 67 years (range: 18-106 years). A history of arrhythmia or diabetes mellitus was common (≥10%), with prevalence increasing with age. During follow-up, patients had, on average, 2.3 constipation-related health care contacts and 15.2 additional health care contacts, at average annual costs of €1642 (standard deviation [SD]: €14 618) and €5944 (SD: €18 209), respectively. Most patients (54%) used ≥1 type of laxative during follow-up and 17% used ≥3 types. On average, patients had four laxative dispatches and 43 non-laxative dispatches, at average annual costs of €61 (SD: €74) and €624 (SD: €1137), respectively. **CONCLUSIONS:** Patients with chronic constipation were mainly elderly with high disease burden, as demonstrated through frequent health care contacts (17.5/year) and extensive drug use (47 dispatches/year). Constipation-related care accounted for 22% of total resource utilization, while laxatives made up 10% of total drug costs.

PGI14

CHARACTERISTICS OF DIVERTICULITIS-RELATED EMERGENCY DEPARTMENT VISITS IN THE UNITED STATES

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OBJECTIVES: Diverticulitis (DV) exerts a significant burden on health care systems and payers. Although DV is often first diagnosed as an emergent condition in emergency department (ED) settings, few details on characteristics of DV-related encounters in ED settings exist. This study characterizes DV-related ED visits in the US in 2007. **METHODS:** Data were from the 2007 Healthcare Cost and Utilization Project (HCUP) Nationwide Emergency Department Sample (NEDS), a nationally representative sample of ED visits in the US. For each visit in the NEDS, clinical and resource use information is recorded, including patient demographics, diagnoses and procedures performed, payer information, and total charges. Patients with a primary DV diagnosis (ICD-9-CM 562.11 or 562.13) were identified. Patient-, stay-, and facility-specific characteristics were documented for each DV-related ED visit, and compared to all ED visits in the US during the same period. Sampling weights in the NEDS allow for generation of nationally representative estimates. **RESULTS:** Of 122.3 million ED visits in the US in 2007, 284,853 involved a primary DV diagnosis. Among these visits, mean patient age was 58.3 years, ~20 years older than non–DV-related patients (37.8 years; $P<0.0001$); 55.4% were for female patients. DV-related visits most often occurred in the southern US (38.1%), private health insurance was the most frequent payer for these visits (45.6%), and >50% were admitted to an inpatient facility from the ED (56.7%). The mean charge per DV-related ED visit (2011 US dollars) was $3,211, nearly double than for non-DV-related visits ($1,677; $P<0.0001$). Total charges across all DV-related ED visits were ~$1 billion. **CONCLUSIONS:** DV requires careful clinical management, across a variety of health care settings. This study presents novel information on DV-related ED visits in the US. Adding to the body of knowledge regarding DV-related care may help providers and decision makers optimize allocation of resources to treat all DV patients.

PGI15

COST-EFFECTIVENESS ANALYSIS OF LACTEST, A NEW DIAGNOSTIC DRUG TEST FOR HYPOLACTASIA IN SPAIN

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OBJECTIVES: To compare the cost and effectiveness of LacTest® versus other diagnostic procedures available to identify lactose intolerance using the perspective of Spanish National Health System. **METHODS:** A cost-effectiveness analysis was carried out using a decision tree comparing LacTest® with the hydrogen breath test, the capillary blood glucose test and the intestinal biopsy. Data on the effectiveness of each diagnostic procedure, expressed as the sensitivity of each test or the proportion of true positives identified by the test for all patients, were taken from the clinical results of the EUDRA study. The use of health care resources associated with the tests and their costs were obtained from literature review. Costs considered included diagnostic tests, laboratory tests, physician visits and time of health care personnel. The time horizon of the analysis was one year. All costs are expressed in Euro 2012. Results were expressed as the effectiveness and costs of LacTest® compared with those of the other diagnostic procedures. **RESULTS:** The proportion of diagnosed patients, as measured by sensitivity, was higher for LacTest® with 0.991 than for the other diagnostic procedures with values of 0.953 for the intestinal biopsy, 0.785 for the hydrogen breath test and 0.748 for the capillary blood glucose test, respectively. Direct health care costs per patient were €187 with LacTest®, €143 with the hydrogen breath test, €140 with the capillary blood glucose test and € 458 for the intestinal biopsy. **CONCLUSIONS:** The results indicate that LacTest® is demonstrating a higher sensitivity in the diagnosis of new cases of hypolactasia compared with the other tests in this study. LacTest® showed to be the dominant option compared with the intestinal biopsy. When compared with the hydrogen breath test and the capillary blood glucose test, LacTest® showed to be more effective at an incremental cost of €44 and €40, respectively.

PGI16

COST EFFECTIVENESS OF BOCEPREVIR PLUS PEGINTERFERON ALPHA AND RIBAVIRIN VERSUS TELAPREVIR PLUS PEGINTERFERON ALFA AND RIBAVIRIN IN THE TREATMENT OF CHRONIC HEPATITIS C (CHC) IN PREVIOUSLY UNTREATED GENOTYPE I PATIENTS

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OBJECTIVES: In previously untreated adults with hepatitis C virus (HCV) genotype 1 infection the combination of boceprevir (B) or telaprevir (T) plus peginterferon alpha/ribavirin (PR) have shown to produce a higher rate of sustained virologic response (SVR) than peginterferon alfa/ribavirin (PR). The aim of this study is to assess the cost effectiveness of these two antiviral regimens. **METHODS:** We developed a Markov model to describe the clinical history of CHC genotype 1 patients in which one cohort (1) receives PR for 4 weeks followed by BPR for 24 weeks and those patients with a detectable HCV RNA level between weeks 8 and 24 receive PR for an additional 20 weeks; cohort 2 patients receive TPR for 12 weeks followed by PR for 12 weeks and those patients with a detectable HCV RNA level between weeks 4 and 12 receives PR for an additional 24 weeks. All patients are followed for their expected lifetime. The reference patient is 30-year-old with CHC without cirrhosis. The SVRs to BPR and TPR cohorts came from SPRINT 2 and ADVANCE studies. Quality of life for each health state was based on literature. Costs for each health state were based on three Delphi panels, one with hepatologists, one with intensivists and another with oncologists. Costs in 2011 Brazilian Reais and benefits were discounted at 3%. **RESULTS:** BPR increases life expectancy by 0.78 years and quality adjusted life years (QALY) by 1.20 years compared to TPR. BPR is cheaper than TPR (-25,924 Brazilian Reais). **CONCLUSIONS:** In Brazil, for the treatment of previously untreated adults with HCV genotype 1 boceprevir plus peginterferon alpha/ribavirin is dominant compared with telaprevir plus peginterferon alpha/ribavirin.

PGI17

COST-EFFECTIVENESS OF TELAPREVIR WITH PEGINTERFERON AND RIBAVIRIN FOR TREATMENT-NAIVE PATIENTS CHRONICALLY INFECTED WITH HCV OF GENOTYPE 1 IN JAPAN

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OBJECTIVES: Telaprevir introduced recently as a new protease inhibitor for chronic HCV infection showed promising results used in conjunction with peginterferon and ribavirin (triple therapy: TT). We assess the cost-effectiveness of TT compared to peginterferon-ribavirin dual therapy in the treatment of previously untreated Japanese patients with genotype1 chronic hepatitis. **METHODS:** We created a Markov decision model of HCV natural history and progression toward advanced liver disease to evaluate the cost-effectiveness of alternative treatment strategies, in a previously untreated Japanese cohort consisted of patients aged 50 years with genotype 1 chronic hepatitis for a time horizon of lifetime. We compared 3 strategies; no treatment, standard 48 weeks of dual therapy with further 24 weeks of extended treatment for late viral responders (DT+; total 72 weeks) and 24 weeks of TT. The data sources of natural history model were mainly derived from Japanese epidemiological studies. Due to lack of the evidence of the direct comparative effectiveness between TT and DT+ in Japanese HCV patients, the results of a randomized control trial compared TT with standard dual therapy was combined with those of an observational study which compared effectiveness between standard dual therapy and those with extended treatment. **RESULTS:** Our model estimated TT and DT+ strategies could yield 0.67 and 0.48 of the sustained viral response, respectively. In the base case analysis, TT was most effective in comparison with those treated by DT+ and no treatment strategies and could increase by 0.92 and 2.83 the quality-adjusted life years and reduce the lifetime cost by 1.3 and 0.7 million yen, respectively. This dominance of TT over DT+ was robust to sensitivity analysis. **CONCLUSIONS:** TT would be more effective and cost-saving strategy compared with DT+ for untreated patients chronically infected with HCV of genotype 1 in Japan.

PGI18

COST-EFFECTIVENESS OF BOCEPREVIR IN COMBINATION WITH PEGYLATED INTERFERON ALFA AND RIBAVIRIN FOR THE TREATMENT OF GENOTYPE 1 CHRONIC HEPATITIS C: SUBMISSION TO THE NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE (NICE)